



MEASURING OUTCOMES IN ORTHOPEDICS ROUTINELY (MOOR) STUDY

Technical Expert Panel Summary Report

In-Person Meeting, Boston, MA
April 25, 2019

Prepared by:

Brigham and Women's Hospital

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Cooperative Agreement #:

2018A008621, 1V1CMS331637-01-00

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Background

MOOR Study Mission

The Centers for Medicare & Medicaid Services (CMS) has contracted with Brigham and Women's Hospital (BWH) to develop quality measures related to orthopedics. The contract name is Measuring Outcomes in Orthopedics Routinely (MOOR). The cooperative agreement number is 2018A008621, 1V1CMS331637-01-00. Under this contract, The BWH Center for Patient Safety, Research, and Practice will collaborate with Partners Orthopedic Surgery specialty physicians, Massachusetts Health Quality Partners, the Patient Reported Outcomes Measurement System (PROMS) team, and a Technical Expert Panel (TEP) to:

- Develop and refine electronic clinical quality measures (eQMs) in the areas of orthopedic surgery outcomes and medication safety
- Develop a Patient Reported Outcome-Based Performance Measure (PRO-PM) related to orthopedic surgery clinical care

BWH is obtaining expert and stakeholder input on the proposed measures. The BWH measure development team includes experts in quality outcomes measurement. As is standard with all measure development processes, BWH has convened a technical expert panel (TEP) of clinicians, patient advocates, and other stakeholders. Collectively, the TEP members bring expertise in performance measurement, quality and patient safety, and coding and informatics.

This report summarizes the feedback and recommendations received from the TEP during the first TEP meeting. The report will be updated to include feedback from future TEP meetings as they occur.

MOOR Study Goals

To ensure alignment with CMS's Quality Payment Program (QPP), specifically the Merit-based Incentive Payment System (MIPS), the goals of the MOOR project are as follows:

- 1) Convert two existing National Quality Foundation- (NQF-) approved measures for complication following total hip arthroplasty and total knee arthroplasty (THA/TKA) to electronic clinical quality measures (eQMs):
 - a) Risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)
 - b) Opioids in high dosage in persons without cancer following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)
- 2) Develop three new eQMs to address THA/TKA orthopedic surgery patient safety practice and measurement gaps:
 - a) Opioid extended use rate following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)
 - b) Risk-standardized opioid-related respiratory depression rate following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)
 - c) Risk-standardized bleeding-related adverse drug event rate for patients taking anticoagulant medications following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)

3) Develop a new PRO-PM:

- a) Care goal achievement following total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)

In addition, we will explore the anticipated efficacy, costs, and benefits of our proposed eQMs and PRO-PM to our study population (i.e., Medicare fee for service beneficiaries undergoing elective procedures). In the process of developing and refining eQMs and a PRO-PM, we will use existing electronic data to automate workflow and to minimize burden of the measures we develop.

Brigham and Women's Hospital is collaborating with Massachusetts Health Quality Partners (MHQP), a stakeholder engagement organization, and with Brigham and Women's Hospital Department of Orthopedic Surgery specialty physicians and the Partners Healthcare Patient Reported Outcomes Measurement System (PROMS) team to develop eQMs in the areas of orthopedic surgery outcomes and medication safety, and a PRO-PM related to orthopedic surgery clinical care. The collaboration is enhanced by the mutual interests, shared by the participating organizations, that include focusing on patient engagement to improve safety and outcomes using innovative patient-centered technologies.

Measure Development Team

BWH Team Key Personnel

- David Bates, MD, MSc: Principal Investigator
- Patricia Dykes, RN, PhD: Co-Investigator
- Ronen Rozenblum, PhD, MPH: Co-Investigator
- Alexandra Businger, MPH: Senior Project Manager
- Stuart Lipsitz, ScD, PhD: Senior Statistician
- Francois Bastardot, MD: Research Fellow
- Antonia Chen, MD, MBA: Ortho Co-Investigator
- Jeffrey Katz, MD, MS: Ortho Co-Investigator
- Richard Iorio, MD: Ortho Contributor
- Andrew Schoenfeld, MD, MSc: Ortho Contributor
- Rachel Clark, MD: PROMs Medical Director, PHS

BWH Team Personnel

- Stephanie Singleton, BA: PROMs Project Coordinator
- Tien Thai, BS: Software Engineer
- Brianna Ericson, MPH: PROMs Data Analyst
- Michalis Kantartjis, BS: eQCM Data Analyst
- Taylor Christiansen, BS: Research Assistant
- Woongki Kim, BS: Research Assistant

Massachusetts Health Quality Partners (MHQP)

- Barbra Rabson, MPH: President and CEO
- Jim Courtemanche, MPH: Vice President of Programs and Analytics
- Nathalie McIntosh, PhD: Director of Programs
- Ola Szczerepa, MA: Project Manager
- Natalya Martins, BSc: Project Specialist

BWH MOOR Team Consultants

- Rosemary Kennedy, PhD
- Lisa Kern, MD
- Calvin Franz, PhD

TEP Objectives and Purpose

The objective of this first TEP meeting was to gain TEP input on:

Measure Conceptualization:

- Applying the measure evaluation criteria to the candidate measures
- Conducting feasibility assessment

Measure Specifications:

- Constructing technical specifications
- Risk-adjusting outcome measures

Feedback on strategies for measure development, testing, and validation

Input on framework development and candidate measures

TEP Members

Table 1. TEP Member Names and Organizations

Name	Organization	Potential Conflicts of Interest	Attendance at 4.25.19 meeting
Bonnie B. Blanchfield, CPA, SM SC.D <i>Senior Scientist</i> <i>Assistant Professor in Medicine</i>	Brigham and Women's Hospital Harvard Medical School	None	Absent
Kevin Bozic, MD, MBA <i>Department Chair - Surgery and Perioperative Care</i>	Dell Medical School	None	Present
Charles Bragdon, PhD <i>Associate Director Clinical Studies Group</i> <i>Director of Partners Healthcare Orthopaedic Registries</i>	Massachusetts General Hospital Harris Orthopaedic Laboratory	None	Present
Martha Carnie <i>Senior Patient Engagement Advisor</i> <i>Co-Chair of BWH Patient and Family Advisory Council Steering Committee</i>	Brigham and Women's Hospital	None	Present
Aileen Davis, PhD <i>Senior Scientist</i>	Division of Healthcare and Outcomes Research, Toronto Krembil Research Institute	None	Present

Name	Organization	Potential Conflicts of Interest	Attendance at 4.25.19 meeting
Lisa Hines, PharmD <i>Senior Director – Measure Operations and Analytics</i>	Pharmacy Quality Alliance (PQA)	*Yes: Employed by PQA, the developer/steward for related opioid prescribing quality measures	Present
William Jiranek, MD <i>Professor and Vice Chair</i>	Department of Orthopaedic Surgery, Duke University	*Yes: Receives royalties from Depuy, Inc., and stock options from Biomech LLC	Present
Jay Lieberman, MD <i>Chair and Professor</i> MOOR Study TEP Chair	Department of Orthopaedic Surgery – Keck School of Medicine, University of Southern California	*Yes: Receives royalties from Depuy, Inc.	Present

*Conflicts of Interest were disclosed to the TEP Chair, TEP members, and all members of the BWH MOOR team. Collectively, the group decided that the conflicts of interest stated did not conflict with the work of the project.

Pre-work

TEP members were sent PDFs of PowerPoint presentations prepared by the BWH MOOR team one week prior to the meeting. The PowerPoint presentations included details on the following measures:

- Care goal achievement following total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)
- Risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)
- Opioids in high dosage in persons without cancer following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)

Detailed Summary of TEP Meeting 1 (April 25, 2019)

The TEP Meeting 1 was held in person at Brigham and Women's Hospital on April 25, 2019. The Agenda was as follows:

8:00 – 8:30am	Welcome, Introductions & Conflict of Interest Disclosure (Bates, Lieberman, Businger)
8:30 – 8:40am	MOOR Project Overview (Bates)
8:40 – 8:50am	Overview of Measure Development Process (Rozenblum)
8:50 – 9:00 am	Overview of MHQP Measure Development Contributions (Rabson)
9:00 – 9:10am	Overview of Measure Evaluation Process (Dykes)
9:10 – 9:15am	TEP objectives & Ratify Charter (Lieberman, Businger)

9:15 – 9:20am	Break into Groups
9:20-12:00pm	Measure Specific Discussions PROMs session (Group 1) eCQMs session (Group 2)
12:00-12:30pm	Lunch
12:30-3:00pm	Measure Specific Discussions PROMs session (Group 2) eCQMs session (Group 1)
3:-3:15pm	Break
3:15-4pm	Conclusions/ Next Steps (Bates, Lieberman, Businger)

Welcome, Introductions, and Project Overview

- BWH welcomed the TEP members and led introductions. All TEP members, BWH team members, and other guests of the meeting introduced themselves. BWH provided an overview of the MOOR project overall and project goals.
- Conflict of Interest Disclosures (included in Table 1)
 - The group decided these conflicts of interest will not conflict with the MOOR study.
- BWH presented an overview of the measure development process.
- MHQP presented an overview of MHQP and their contributions to the project.
- BWH presented an overview of the measure evaluation process.
- BWH presented on the objectives of the TEP.
- BWH and the TEP Chair led the discussion on ratifying the charter. TEP members were given about 15 minutes to review the charter. TEP members approved the charter.
- TEP members were split into two groups. One group attended the PRO-PM development breakout session first, and the other TEP members attended the eCQM development breakout session first. One TEP member, Bonnie Blanchfield, was absent from the meeting.

PRO-PM Development Breakout Session 1

TEP Morning meeting and feedback related to the PRO-PM

Date: April 25, 2019

PRO-PM Development Morning Session 9:15 a.m. - 12:00 p.m.

The TEP meeting/feedback summary listed below was presented in this morning session to the attendees listed below and was also presented in an afternoon session to the other TEP members (see afternoon session summary for details).

Attendees:

TEP: Kevin Bozic, Jay Lieberman, Aileen Davis

MOOR PROMs: Ronen Rozenblum, Stephanie Singleton, Francois Bastardot, Taylor Christiansen, Brianna Ericson, Alexandra Businger, Rachel Clark, Peter Meyers, Richard Iorio, David Bates

MHQP: Barbra Rabson, Ola Szczerepa

Agenda:

- Introductions
- Project mission
- Project updates
- Description of measure
- Measure development strategy
- Framework and potential tool
- Workflow, data and measure specification
- Open discussion
- Follow-up

The MOOR PROMs team grouped the feedback of the TEP into four areas that are in line with main topics covered in the agenda:

1. Measure Development Strategy and Timeline
2. Care Goal Achievement (CGA) Framework and Potential Measure(s)
3. PROMS Workflow and Data Collection
4. Other

1. Measure Development Strategy and Timeline

- The MOOR PROMs team presentation to the TEP on the measure development strategy of a new patient-reported outcome performance measure (PRO-PM) related to care goal achievement following orthopedic surgery (i.e., THA and/or TKA).
 - The MOOR PROMs team laid out their structured approach to the measure development strategy and timeline
 - The MOOR PROMs team recapped their process of following the CMS grant timeline, CMS Blueprint (i.e., Measure Development Lifecycle Plan), NQF processes/dates related to measure endorsement, literature review, and stakeholder input.
 - The MOOR PROMs team noted how they used the aforementioned to compose their strategy, which is broken into 4 sections: conceptualization, specification, testing, and implementation, in line with CMS's Measure Development Lifecycle Plan.
 - After their presentation, the MOOR PROMs team asked the TEP members for feedback on the proposed project plan and timeline:
- TEP Members' Feedback
 - Overall Input on the Measure Development Strategy
 - All TEP members stated that the PRO-PM measure development strategy, stages, and methodology were comprehensive, detailed, and thorough.
 - They validated the PRO-PM measure development strategy plan.
 - Timeline Concerns
 - Several TEP members raised concerns that because measure specification, testing, and implementation could take longer than the length of the contract, the MOOR PROMs team may want to consider asking CMS for an extension to

the contract timeline. The TEP members stated that their concerns related to the tight timeline are based on other PROM/PRO-PM development projects that they are and/or were involved with. According to them, in some cases, it took the measure developers three years to finalize just the measure specification.

- Measure Specification
 - Several of the TEP members mentioned including mid-level providers (e.g., PAs, NPs, PTs) in the measure development process as they also provide clinical care and can be a source of communication regarding patients' goals and expectations. Due to the post-surgical protocol, patients often see a mid-level provider instead of the surgeon unless medically needed.
 - The MOOR PROMs team noted that they did include mid-level providers and will continue to do so in subsequent interviews/focus groups.
- Patient Population
 - Several TEP members highlighted the importance of having racial and ethnic minority representatives when collecting patients' perspectives (e.g., via interviews and focus groups), to inform their decisions about the proposed measure. They also suggested ways to increase minority participation as part of the scope of work, specifically in the qualitative methods, e.g., interviews, focus groups.
 - Some TEP members suggested the MOOR PROMs team should think about identifying populations outside of Boston that better represent total joint replacements among minority populations on a national level, if feasible.
 - One member used an example of using an orthopedic joint registry from which to pull data for his project.
 - Some TEP members suggested looking at what has already been published and to see what the MOOR PROMs team can pull from those existing studies, publications, etc., with regard to minority populations. They stated that most of the information related to the proposed measure, including minority data, already exists and should be incorporated before the MOOR PROMs team thinks about expanding their activities beyond the scope of this project.
 - The MOOR PROMs team stated that they would take the aforementioned suggestions into consideration and would look into maximizing minority patient participation at BWH, expand beyond BWH to find more minority patients within the Partners HealthCare system as a whole, and look at existing literature (e.g., research studies and reports in the field) with regard to racial and ethnic minorities. Update: Following the TEP meeting, the MOOR PROMs team and MHQP identified additional racial and ethnic minorities in their data sample and included them in subsequent interviews.
 - If feasible, the MOOR PROMs team will look at engaging other institutions with more robust minority patient populations for the qualitative assessment in the measure specification stage.

2. Care Goal Achievement (CGA) Framework and Potential Measure(s)

- The MOOR PROMs team presented to the TEP evidence-based information (i.e., research studies and reports) related to the concept of Care Goal Achievement (CGA). Specifically, they highlighted the importance of identifying and incorporating patients' goals and expectations

into the quality of care and engaging patients in the care process, the associations between meeting patient goals/expectations and better health outcomes, the current gaps and challenges in identifying and addressing patients' goals/expectations, the evidence related to goals/expectations in patients undergoing THA/TKA, and information about a few existing measures related to CGA. Finally, a member of Massachusetts Health Quality Partners (MHQP) presented preliminary findings of their interviews with THA/TKA patients about this topic.

- Afterwards, the MOOR PROMs team asked the TEP members for feedback on the concept of CGA, a potential framework, and potential measure(s).

- TEP Members' Feedback

- The Need to Develop a Care Goal Achievement PRO-PM
 - The value in developing a care goal achievement PRO-PM was noted by most of the TEP members.
 - A few members highlighted that although many measures assess outcomes in healthcare, they recognize the need to measure patient expectations and goals.
- The Concept of CGA and Conceptual Framework
 - TEP members agreed that CGA is a complex concept.
 - TEP members stated that the concept of goals and the concept of expectations are not the same.
 - TEP members noted the issues of 'Realistic Expectations' vs. 'Unrealistic Expectations.'
 - TEP members stated that patient expectations change over time.
 - TEP members highlighted the effect of past experience on current expectations and perceptions (e.g., primary surgery vs. revision surgery).
 - Many of the TEP members agreed that patients and surgeons share different perceptions (e.g., related to expectations and goals) about THA/TKA outcomes.
 - TEP members stressed the need to be practical and use what has already been done to inform the framework and proposed measure. Thus, the MOOR PROMs team based their measure development strategy decisions on existing literature, research studies, measures, and reports in the field.
- Measure Specificity – Overall
 - The MOOR PROMs team presented 2 different measures to demonstrate the different approaches of surveys – one being very clinically-specific (i.e., Hospital for Special Surgery (HSS) Knee Replacement Expectations Survey) and one being a more general, multi-clinical survey (i.e., Musculoskeletal Outcomes Data Evaluation and Management Scale (MODEMS) questionnaire).
 - TEP members noted that the HSS surveys were now being used as the 'gold standard' in measures used for clinical standards.
 - MODEMS, while a good measure for general use, would not offer enough clinically relevant information and is better suited for long-term collection, not short-term collection.
 - Note: MODEMS is not widely used today due to the fact that it was AAOS' first foray into electronic PRO collection and had

- poor roll out, with no attachment to improved patient care, and lack of clinician buy-in.
 - TEP members suggested the MOOR PROMs team look at a BWH-developed and validated satisfaction survey by MOOR project consultant, Dr. Jeffery Katz, that was similar to MODEMS, but shorter.
 - The Self-Administered Patient Satisfaction Scale for Primary Hip and Knee Arthroplasty
 - Several TEP members suggested one option could be to develop a short satisfaction survey and just ask the patient if they are happy with their care.
 - TEP members mentioned other various measures that assess goal attainment – COMP, UCLA – as well as other surveys that ask patients what mattered to them.
 - Weaknesses of some of these measures were discussed – they are free-text so unless an interview is administered, it's not as effective.
 - TEP members noted that scale needs to be asked pre-surgery and post-surgery.
 - Measure needs to be useful clinically
 - TEP members noted that the measure would need to be specific to THA and TKA due to the varying expectations/goals.
 - While only 5% of THA patients are not satisfied with the surgery outcomes, about 20% of TKA patients are not satisfied with the surgery outcomes.
 - THA patients generally get what they want but TKA patients do not.
 - All of the TEP members said if the MOOR PROMs team had to develop only one measure, to choose a PROM/PRO-PM related to TKA due to, but not limited to, the following reasons:
 - Knee population is very heterogenous in terms of age, exercise
 - Missed expectations is a big problem in knee patients, but not hip patients
 - Most of the TEP members noted that THA patients do so well in outcomes that seeing significant improvement in patients becomes difficult (ceiling effect). Interestingly, the TEP members mentioned that TKA patients showed improvement but they are usually not satisfied.
 - Measure Specificity – Primary vs. Revision Total Joint Replacement
 - In a discussion regarding primary and revision total joint replacement, TEP members said that most measures focus on primary replacement and exclude revisions and fractures. The MOOR PROMs team asked which they should focus on and all of the TEP members said to focus only on primary total joint replacements.
 - TEP members noted that there are differences in goals and expectations between primary joint replacement patients and revision joint replacement patients.

- The effect of past experience on current expectations and perceptions led to differences in goals/expectations between revision joint replacement patients and primary joint replacement patients.
- Goals and expectations for revision patients are very complex, and due to the low number of revision cases versus primary cases there may not be enough to draw conclusions.
- Based on the TEP suggestion and the above information, the MOOR PROMs team will consider focusing only on primary joint replacements.
- Measure - Language
 - Several TEP members brought up the issue of inclusion of Spanish-speaking patients in the measure development process (e.g., interviews).
 - The MOOR PROMs team will further consider the impact of not administering interviews in Spanish, e.g., selection bias and relevance of results across populations.
 - Partners HealthCare noted that they will have the ability to offer surveys in Spanish with a future update to their survey administering tool.
 - The MOOR PROMs team noted that while the grant specifies the proposed CGA measure will be done only in English, the value of designing a measure in Spanish in the future was acknowledged.
- Measure – General Discussion
 - One of the challenges mentioned by TEP members was that patients have unrealistic goals and expectations for their surgical outcomes.
 - One solution mentioned was using a total joint education class held for patients before surgery where the instructors could mention what to expect before, during, and after surgery. However, often patients want the message to come from the surgeon, not another health care provider.
 - TEP members noted that surgeons' education to the patient about realistic expectations is as bad as it has ever been because of time constraints, and the internet has contributed to inaccurate information.
 - TEP members noted gender differences in expectations/goals regarding surgery.
 - MHQP representative noted that men were more likely to feel that communication about expectations/goals is the patient's responsibility to bring up with the surgeon, whereas women were more likely to feel that it was the provider's responsibility.
 - A few TEP members and MHQP representative stated that some patients preferred to answer questions by paper (vs. electronic survey), so they could see their provider has it in their hands and use it to make decisions.

3. PROMS Workflow and Data Collection

- Dr. Rachel Sisodia, Associate Medical Director for Patient Reported Outcomes at Partners HealthCare, presented to the TEP members information about Partners HealthCare's current PROMs program, including information about Partners HealthCare's mission and vision related to the use of PROMS, information about PROMS volume, trends, and scores.
 - Partners HealthCare picks up about 90% of PROMs in the clinics via iPad, which is the opposite of the usual. Most clinics across the country pick up most PROMs on a patient portal, mainly while patients are at home. Partners HealthCare's Patient Gateway is

- being eliminated in July in favor of Epic's portal which is expected to be more user-friendly.
- There is not a lot of variation among surgeons on PROMs scores.
- Partners HealthCare is focusing on trying to figure out minimal clinically important difference (MCID), as well as thinking about inclusivity in the data population and the implications of Partners HealthCare's primarily white population.
- Dr. Sisodia presented score curves over time, stratified by location, surgeon, ASA score, and PROMIS 10 Mental Health score.
- Dr. Sisodia presented associations between PROMs scores and opioids work that Partners HealthCare has been working on.
- The MOOR PROMs team presented to the TEP members data specific to THA/TKA patients who completed PROMs surveys (e.g., HOOS, KOSS, PROMIS-10) at the Partners HealthCare level and BWHF level.
 - Survey scores plateau around 90 days for both TKA and THR.
 - There is high variability among surgeons for both TKA and THA procedure volume and survey completion volume.
 - After presenting these data, the MOOR PROMs team asked the TEP members for feedback on the workflow and on the data presented.
- TEP Members' Feedback
 - Several TEP members mentioned patient-reported data gets entered into the system but is not usually used by clinicians due to workflow process; TEP members and MHQP representative also noted that patients mentioned that they provide the data but it isn't mentioned/used in their visit.
 - Several of the TEP members mentioned including mid-level providers (e.g., PAs, NPs, PTs) in the PROMs workflow process as they also provide clinical care and can also be a source of communication regarding patient's goals and expectations. Due to the post-surgical protocol, patients often see a mid-level provider instead of the surgeon unless medically needed.
 - TEP members noted that the response rates among paired data sets for both THA and TKA were low which could present issues with testing.
 - Using mixed methods for PROM data collection was discussed and supported.
 - TEP members noted that using the phone for PROM data collection for clinical use was also a supported and used method in programs like CJRR.
 - The Partners HealthCare PROMs representatives noted that implementing the proposed CGA measure on a system-wide level is easier/better which could also increase patient survey completion compliance.

4. Other

- TEP Members' Feedback
 - Many of the TEP members support measures that are short and simple to reduce patient burden.
 - Several of the TEP members were on the board that recommended the HOOS Jr/KOOS Jr, PROMIS Global Health or Veterans Rand (VR) 12 for use in the CMS-sponsored model Comprehensive Care for Joint Replacement (CJR) to keep the measure questions to 20

questions to reduce patient burden. The series of questions only takes about 6-7 minutes for most patients complete.

- Several TEP members asked the question “How can we make the experience better for patients?” in relation to the PROMs process.
 - Partners HealthCare acknowledged the importance of making the experience better for patients and has addressed several challenges that have and will improve the PROMs process at Partners HealthCare.

PRO-PM Development Breakout Session 2

TEP Afternoon meetings and feedback related to the PRO-PM

Date: April 25, 2019

Time: 12:30 p.m. – 3:00 p.m.

The TEP meeting/feedback summary listed below is in reference to the topics presented in the afternoon session to the attendees listed below. These topics were also presented in a morning session to the other TEP members (see morning session summary for details).

Attendees:

TEP members: Lisa Hines, Martha Carnie, William Jiranek, Jeffrey Katz, Charles Bragdon

MOOR PROMs team: Ronen Rozenblum, Stephanie Singleton, Francois Bastardot, Brianna Ericson

MHQP: Ola Szczerepa

Agenda:

- Introductions
- Project mission
- Project updates
- Description of measure
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The MOOR PROMs team grouped the feedback of the TEP into four areas that are in line with main topics covered in the agenda:

1. Measure Development Strategy and Timeline
2. Care Goal Achievement (CGA) Framework and Potential Measure(S)
3. PROMS Workflow and Data Collection
4. Other

1. Measure Development Strategy and Timeline

- The MOOR PROMs team presented to the TEP on the measure development strategy of a new patient-reported outcome performance measure (PRO-PM) related to care goal achievement following orthopedic surgery (i.e., total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)).
 - The MOOR PROMs team laid out their structured approach to the measure development strategy and timeline.

- The MOOR PROMs team recapped their process of following the CMS grant timeline, CMS Blueprint (i.e., Measure Development Lifecycle Plan), NQF processes/dates related to measure endorsement, literature review, and stakeholder input.
 - The MOOR PROMs team noted how they used the aforementioned to put together their strategy that is broken into 4 sections: conceptualization, specification, testing, and implementation; according to CMS's Measure Development Lifecycle Plan.
 - After their presentation, the MOOR PROMs team asked the TEP members for feedback on the proposed project plan and timeline:
- TEP Members' Feedback
 - Overall Input on the Measure Development Strategy
 - While some of the TEP members appreciated the detailed measure development strategy and methodology, a few TEP members had concerns that the measure development strategy seemed like exploratory research.
 - The MOOR PROMs team reiterated that they developed the measure development strategy based on information from other existing measures that were successfully developed and endorsed as well as discussions with measure development experts.
 - Timeline Concerns
 - Several TEP members raised concerns regarding the ambitious measure development tasks/timeline presented, suggesting that the time needed to develop and test the proposed measure might be beyond the scope of this grant.
 - One TEP member suggested that using prior work in the field might be helpful; another suggested using an existing validated measure.
 - The general consensus was that if domains that came out of work already done (e.g., previous research studies and related measures in the field) were consistent, then that may be a place to economize and save time.
 - The MOOR PROMs team stated that they will review their strategic plan again and look at other existing measures, as suggested by the TEP members.

2. Care Goal Achievement (CGA) Framework and Potential Measure(s)

- The MOOR PROMs team presented to the TEP evidence-based information (i.e., research studies and reports) related to the concept of Care Goal Achievement (CGA). Specifically, they highlighted the importance of identifying and incorporating patients' goals and expectations into the quality of care and engaging patients in the care process; the associations between meeting patient goals/expectations and better health outcomes; the current gaps and challenges in identifying and addressing patients' goals/expectations; the evidence related to goals/expectations in patients undergoing THA/TKA, and information about a few existing measures related to CGA. Finally, a member of the Massachusetts Health Quality Partners (MHQP) team presented their preliminary findings of their interviews with THA/TKA patients about this topic.
 - Afterwards, the MOOR PROMs team asked the TEP members for feedback on the concept of CGA, a potential framework, and potential measure(s).
- TEP Members' Feedback

- The Need to Develop a Care Goal Achievement PRO-PM
 - The TEP members saw value in developing a care goal achievement PRO-PM.
 - The TEP members stated that the proposed measure may facilitate a dialogue between healthcare providers and patients about their goals and expectations related to THA/TKA (e.g., discuss realistic vs. unrealistic expectations) and help them work together to meet those goals and expectations.
 - The TEP members felt that the proposed measure could help patients interact with providers in an effective way.
 - The TEP members noted that hearing what the patient wants is important and what is important to clinicians needs to be addressed in the measure.
 - The TEP members also wanted to know if patient's goals/expectations were addressed.
- The Concept of CGA and Conceptual Framework
 - Some of the TEP members stated that CGA is a complex concept.
 - One TEP member mentioned that multiple studies showed that people with higher expectations are more likely to do better medically, which may be more attributed to people's positive attitude and/or being optimistic than their level of expectations. This speaks to the complexity of the concept. Another TEP member agreed and stated that it also has to do with communication and trust between patient and physician. The better the relationship, the better the outcomes.
 - Several TEP members stated that expectations and goals are different, and that it matters which one was evaluated.
 - Several TEP members noted that there are some potential biases in asking patients about their expectations before the surgery, especially when the surgery was a year ago because expectations can change and are very dynamic. Therefore, the timing of when to ask patients about their goals or expectations is an important factor.
 - The TEP members agreed that the main domains related to CGA in THA and TKA should be pain relief, physical function, and well-being.
- Importance of Getting Input from Payors on the Proposed Measure
 - A couple of TEP members wanted to know if the MOOR PROMs team planned to gather input on the measure from payors in addition to patients and clinicians and raised the following questions/comments:
 - 'What outcome would make you regret spending money on the surgery?' (directed at CMS).
 - Some TEP members felt CMS would be interested in paying out on things that help people stay independent because it is cheaper than the alternative and if they are able to return to work (which doesn't affect a lot of Medicare people).
 - Another member mentioned that it has been proven that better communication results in better outcomes and more compliant patients, which translates to a financial incentive because better outcomes lead to fewer readmissions. CMS is also paying for physical therapy which addresses a compliance issue with patients.

- The MOOR PROMs team and MHQP representative acknowledged the importance of the issues raised and mentioned that interviews with payors are also part of the measure development strategy.
 - Potential Exclusion Criteria
 - A couple of TEP members felt that one exclusion criteria should be those with cognitive impairment, which would expand beyond the current dementia criteria.
 - The MOOR PROMs team stated that they would consider other existing and validated measures and their exclusion criteria as well as talk with experts in the field; based on these findings, the MOOR PROMs team will consider expanding beyond dementia to exclude those who might have other cognitive issues.
 - Measure Specificity – Overall
 - The MOOR PROMs team presented 2 different measures to demonstrate the different approaches of surveys – one being very clinically-specific (i.e., *Hospital for Special Surgery (HSS) Knee Replacement Expectations Survey*) and one being a more general, multi-clinical survey (i.e., Musculoskeletal Outcomes Data Evaluation and Management Scale (MODEMS) questionnaire).
 - The MOOR PROMs team asked the TEP members to share their preference for a measure that is clinically specific vs. a measure that is more generic.
 - The TEP members felt a more generic measure, e.g., ‘were your goals met?’ was the kind of survey the MOOR PROMs team should create.
 - Several TEP members felt that the surveys currently in use were already too specific; there is no need for an additional clinically-specific measure. There is a need for a generic measure that can be applied to both THA and TKA.
 - One TEP member was skeptical of MODEMS, similarly to the physicians in the morning group.
 - Several TEP members felt that achieving the goals (not what the goals are in the first place) was the important thing to measure and that expectations and goals are different, and it matters which one was evaluated.
 - One challenge noted by the TEP members was reducing and refining the questions so that they are meaningful to patients and providers.
 - One TEP member stated that multi-item scales help to correct for random error in large samples. However, one item precision can be achieved with large sample sizes too.
 - The MOOR PROMs team presented a few potential types of measure scales and asked what is useful to the patient and useful to the clinician.
 - They broke it down further and offered two scenarios:
 - One scenario was to ask an open-ended question before surgery such as ‘What is your main goal/expectation?’ then post-surgery ask ‘Did we address the things that were most important to you?’ The answer would be on a 0-10 scale.
 - The second scenario was to ask the patient to rate what is most important to them from a pre-existing list of items, then post-surgery ask if it was addressed.

- TEP members agreed that the second scenario is too complicated to develop.
 - One TEP member suggested using the Net Promotor (NP) score instead of coming up with something new as a validated measure for expectations. He uses NP in his joints class to have patients gauge if what they are doing is helpful at all.
 - The MOOR PROMs team stated that they will review the NP measure.
- Short and Simple Measure with Minimal Burden on Patients and Clinicians
 - All TEP members agreed that the proposed measure should be short and simple.
 - TEP members noted that the proposed measure should not create additional burden on patients and clinicians.
 - A few TEP members provided examples for short and simple initiatives:
 - One TEP member said after her surgery, she received an email every week from her physician's office asking if she could do 'X', which was sent to her for a while then she stopped receiving them. She feels patients hate the surveys, although some don't mind the burden if they know the surveys will be utilized.
 - Another TEP member asks his patients to have 3 questions they want answered in their visit and he directly addresses them in the clinic.
 - The MOOR PROMs team acknowledged that having a tool that is short and simple is better for patients than a longer, more complex survey.
- Measure – Language
 - All TEP members agreed that readability is very important and is evaluated during the psychometric evaluation phase
 - The MOOR PROMs team agreed that readability is very important and that their measure development strategy includes psychometric evaluation.
- Concerns about 'Gaming the System'
 - A couple of TEP members raised some concerns about patients "gaming the system," or using PROMS to promote their goals and plans. For example, one TEP member stated that some patients learn what is a low enough KOOS score to justify a surgery and answer the survey accordingly even though they don't need surgery. The TEP members' discussion about this topic focused also on whether the problem is the patient or the measure.
 - The MOOR PROMs team felt that this potential manipulation would not be an issue with the proposed measure.

3. PROMS Workflow and Data Collection

- The MOOR PROMs team presented to the TEP members data specific to THA/TKA patients who completed PROMs surveys (e.g., HOOS, KOOS, PROMIS-10) at Partners HealthCare level and BWHF level.
 - Survey scores plateau around 90 days for both TKA and THA
 - There is high variability among surgeons for both TKA and THA procedure volume and survey completion volume.
 - After presenting, the MOOR PROMs team asked the TEP members for feedback on the workflow and on the data presented.

- TEP Members' Feedback
 - Workflow Challenges
 - Several TEP members felt that PROMs have to be part of the standard process of care in order to get patients to complete their surveys.
 - TEP members felt it was important to set the expectation with patients that pre-op and post-op surveys are a regular part of their standard of care to get patients to complete their surveys and enable appropriate use of this information by clinicians to help their patients.
 - Several members suggested having people in the waiting rooms/areas to help patients fill out surveys or get registered for the patient portal.
 - The MOOR PROMs team pointed out that there will be an Epic upgrade, switching back to MyChart which has a better patient interface and hopefully response rates will go up due to this change.
 - Survey Completion Rates at Partners
 - The general consensus among TEP members is that 'good data in is good data out;' therefore they understood the importance of achieving a high response rate of completed surveys at Partners HealthCare.
 - Several TEP members noted that being able to have patients complete their surveys at home could help collect more data.
 - It was also noted that oftentimes patients feel there is no reason to complete post-op surveys because those who are doing well are not coming in for follow-up appointments, so their follow up data is not captured.
 - One TEP member suggested a mixed method approach for data collection in order to ensure high response rates of PROMs. Specifically, he mentioned data gathered by phone, paper, and face to face are reliable methods. The other TEP members agreed that mixed methods are necessary for needed response rates and are a good idea to increase response rates.
 - TEP members also discussed a concern with low response rates having selection bias because data collected further away from a patient's surgery date, e.g., 1 year follow-up data, is from people who are local or are having complications.
 - Other TEP members agreed this could be a problem because it is not data transparency and does not tell the whole story.
 - The MOOR PROMs team pointed out that a lot can be learned from the response rates in terms of testing.
 - Other selection biases mentioned from the group were around the KOOS curves which one TEP member was concerned were not representative of the typical knee replacement at the BWH. He thought that the curve should reflect more success in reaching the minimal clinically important difference, which is close to 20 on the long form.
 - Some members felt physicians expect hip scores to be higher than knee scores - hip scores shouldn't just plateau at 90 days after surgery, they should plateau more around 180 days after surgery.
 - The MOOR PROMs team reminded the group that per CMS' request, the data is being reported out at the clinician and group level which can add to the complexity given the surgeons' volume of cases.

Other

- TEP Members' Feedback

- One member suggested that the MOOR PROMs team should be asking patients their attitude toward shared decision making and its importance to them.
 - A couple TEP members also asked the MOOR PROMs team if 'appropriate use' is part of their concept.
- One TEP member stated that if people think they will get a survey of 3 questions on their phone, that is revolutionary. Thus, using apps/texts to access and complete a survey could enhance the response rate of PROMs

eCQM Development: NQF 2940 eCQM Conversion Discussions

Measure Numerator: MME Calculations

- The eCQM team reviewed the rationale for selecting 90 MMEs as the threshold, specifically NQF 2940 was adopting this threshold based on stakeholder input. Since we are retooling this measure as an eCQM, we will use this same threshold.
- One TEP member believes that it would be hard to go over the 90 MME threshold value given the current standard practice in opioid prescription guideline.
- One TEP member pointed out the challenge of calculating the daily MME values considering the differences between opioid prescription filled vs. taken.
 - The same TEP member believes calculating the MME values are less reliable with knowing only the days' supply of prescriptions in general.
- To accurately determine how much opioid prescriptions patients took, BWH explained Dr. Antonia Chen's method of surveying patients and asking if they filled their prescription, and how much they took. This approach helps to examine the noise (of what's prescribed vs filled).
 - Many TEP members believed that this is a good start in determining how much opioids patients took vs. filled.
- A TEP member noted his/her colleague at Beth Israel Deaconess Medical Center studied how much patients took opioids following surgical procedures. This TEP member will give his/her colleague's contact information to the BWH team.
- One TEP member suggested that we review the literature for evidence related amount of opioids prescribed and potential for harm.

Measure Numerator: Defining the Opioid Episode

- The TEP agreed that the best option is to start the opioid period one month before the date of procedure.
 - One TEP member noted that every orthopedic surgeon has issues with patients that are not opioid naïve. Therefore, it doesn't make sense to start opioid episode on the day of surgery.

- A TEP member agreed and noted issues with attribution if a patient was already on 90 MME threshold although the orthopedic surgeon did not prescribe any opioids prior to surgery.
 - Another TEP member noted that based on his/her experience, about a quarter of patients coming in for arthroplasty have an existing, active opioid prescription.
- All TEP members agreed that starting opioid episode period a month before the TJA procedure date would capture all the patients who are not opioid naïve.
 - The TEP agrees that this has good face validity.
- The TEP discussed how our measure should define the end of the opioid episode if we don't need to follow the 90 day criteria
 - One TEP member thinks the opioid episode should end on the date of the last prescription, if no further prescriptions show up in the electronic health record.

Measure Denominator:

- The TEP discussed the concept that patients may be on high opioid dosage before surgery because they're in so much pain, but a lot of them don't take much of the opioid prescription after surgery because they're in less pain. With this in mind, it would be wrong to completely exclude patients who demonstrated high dosage opioid use prior to surgery because they may not take as much after the surgery.
- One TEP member felt that in terms of exclusions, it's difficult to determine who's more chronically ill.
 - A TEP member noted that PQA excluded patients with cancer because they have different goals of therapy.
 - A TEP member noted that the CDC recommends excluding patients on palliative care, but it's hard to define palliative care for patients. This TEP member thinks exclusions may end up more related to chronic advanced diagnosis, and that may translate to palliative care.
 - A TEP member noted that PQA is adding sickle cell disease as one of their exclusions for their opioid quality measures.^a
- One TEP member mentioned that it is rare for a TJA to be performed on patients on hospice and cancer patients. The same TEP member suggested excluding patients with multiple comorbidities since these patients genuinely need the opioid medications for pain management.
- One TEP member felt we should exclude patients with opioid use disorder. He/she noted that there is a value set for this already in the VSAC.
 - Another TEP member stressed understanding the relationship between knee/hip pain and opioid use disorder. Do they have a drug problem because their hip/knee hurts or do they have a drug problem AND hip pain?

Alpha and Beta testing:

- The TEP felt that the timeline presented was an aggressive timeline.
- One TEP member suggested using state PDMP data.
 - BWH explained that we already tried this approach, but Massachusetts PDMP would not give us patient data.
 - One TEP member mentioned that PDMP data is just pharmacy claims data.

- One TEP member thinks it would be possible to obtain data on how many prescriptions were written in this zip code in the certain time-period.
- One TEP member noted his/her colleague at NYU Langone received PDMP data from New York. This TEP member will reach out to ask how his/her colleague got data access.

eCQM Testing on Multiple EHR Systems

- BWH explained that finding vendors to formally test our eCQMs has been a challenge.
 - The TEP members expressed that they have had the same challenge with their measure testing.
- One TEP member recommended reaching out to NQF to establish a friendly and collaborative relationship.
 - This would help the measure through the scientific method panel.
 - A TEP member noted that NQF has a team that evaluates the landscape of opioid related measures, so it is strongly recommended to identify who is on the TEP, and who is the measure developer.

Medication Grouping based on opioid classes:

- We proposed the idea of creating value sets for each opioid class using NDC and RxNorm codes.
- The TEP agreed with the grouping of the codes.

Unintended consequences:

- One TEP member emphasized the importance of the topic of unintended consequences. The TEP member reports the CDC recently published an editorial in New England journal about how the CDC guidelines are being misapplied, and their concerns about unintended consequences. He/she notes how to monitor for unintended consequences is a difficult question to answer.
 - One TEP member stated that patients who use opioids responsibly feel stigmatized about their opioid use behavior and encounter roadblocks in acquiring their prescriptions.
- One TEP member pointed out that many patients who are referred to the orthopedic surgeon with complex joint issues have already been on opioids with doses greater than 90 MME per day.
 - This TEP member believes that incentives should be appropriate for surgeons taking care of these complex patients.
- One TEP member pointed out that this measure should be tested in other geographical areas because some regions might have more people on high dosage opioids.

Voting:

- Denominator harmonization
 - Harmonizing with NQF 1550 (another NQF endorsed measure) denominator to identify elective primary TJA population
 - All members (from both morning and afternoon groups) agreed with this
- Defining the opioid episode
 - All TEP members (both morning and afternoon groups) agreed to include a look back period of 30 days to see what was prescribed in that period and limit the time period to 90 days' post procedure.
- Denominator Exclusions

- a. All TEP members (both morning and afternoon groups) agreed to exclude patients with sickle cell disease
- b. BWH will do preliminary work looking at the opioid use disorder value sets and determine if patients with opioid use disorder should be excluded.

eCQM Development: NQF 1550 eCQM Conversion Discussions

Measure Denominator:

- One TEP member asked why our measure is only focusing on Medicare FFS beneficiaries.
 - BWH responded that we're just following the specifications of existing clinical quality measure NQF 1550 for now, but is considering measuring ALL patients over the age of 65.
- Multiple TEP members suggested removing Medicare FFS enrollment as part of denominator criteria
- One TEP member suggested measuring ALL patients over the age of 18 since younger populations are undergoing THA & TKA more frequently as well.
- Denominator Exclusions: One TEP member brought up the point that mechanical complication codes can sometimes be used for revision when patients come in for complication. The discharge diagnosis could be prior hip replacement and mechanical code.
- One TEP member discussed issues with encountering a patient that have a code of mechanical complication on the day of admission.
 - How do we determine the patient had complication before or after the procedure?
 - BWH team informed the TEP members that we will be looking at the inpatient event to signify the complication.

Measure Numerator:

- The TEP advised BWH to stick as close to the original measure as possible, except when it makes sense to change the measure specifications.
- The TEP mentioned that pulmonary embolism patients do not always require a readmission.
- The TEP mentioned that in general, most doctors can avoid readmissions nowadays (observation).
- BWH question for TEP: Should we include inpatient and outpatient encounters for complications?
 - a. After discussions with TEP, BWH will address this issue empirically. We will look at this down the road, and maybe run the analysis both ways.
- One TEP member asked how our measure identifies complications in the EHR
 - a. BWH team responded that for each patient, our eCQM builds a complete 90-day picture of inpatient encounters where there is date and ICD-10 (procedure or condition) code. This code is linked to the patient and the logic test looks at the number of days between the complication event and the procedure. If the # of days fall within 90 days, then the complication count for our numerator.

Alpha and Beta testing

- The TEP raised a concern that not every hospital can pull inpatient (IP) and outpatient (OP) data.

- BWH explained that our goal is to create the eCQM package, and then create a Clarity report to be used at the clinician level.
- A TEP asked the BWH team how the claims data will be used for measure testing, if the measure is to use EHR data as a source.
 - BWH explained that we will use the ACO claims data to validate our EHR data and to see what is missed between claims and EHR data.
 - One TEP member asked about the benefit of using an EHR based measure, if you still have to use claims data. What is the benefit of using this measure, aside from the real-time reporting benefit?
 - BWH explained that we are using the claims data for validation only. The eCQM includes EHR data only.
 - Any provider can use this measure to run reports in realtime to improve quality.
- One TEP member mentioned that for the record, all patients who had TJAs (at BWH) up until June 1 2019 were inpatient TJAs. After June 1, 2019 15% of TJAs will be outpatient (as observation).

Observed Complication Rate:

- One TEP member let the group know that Yale CORE's most updated complication rate is x.x% (2016-2017).
- The TEP discussed how it is difficult to compare complication rates from BWH to those of Yale CORE's because of the small sample size for BWH data.
 - Many TEP members recommended running the analysis using all Partners data.
 - A TEP member asked if it's possible to use data from all hospitals using EPIC
 - BWH team said that this would be very difficult and not feasible with so many data use agreements.

Provider Volume Cut-Off

- TEP members shared mixed opinions regarding the minimum volume requirement of 25 procedures per provider
 - A TEP member noted that in academic institutions, the vast majority of TJA are done by surgeons who operate more than 25 procedures per year.
 - Another TEP member believes that most TJA that occur in the United States per year are done by surgeons who do less than 25 procedures per year.

Value Sets:

- All TEP members were informed that our 1550 eCQM will be leveraging value sets from the Joint Commission.
 - A TEP member stressed the importance of recognizing the "intended use of the value set" when choosing which sets to use for eCQMs.

eCQM Testing on Multiple EHR Systems:

- BWH team stressed the difficulty of finding multiple vendors to test our eCQM package.
 - Many TEP members shared that they had similar issues in the past when developing measures.

- One TEP member emphasized the importance of testing on multiple EHR systems – if we only focus on Epic and Cerner, we will miss many underrepresented hospitals that lack resources.

Voting:

- Should we remove the “Medicare FFS beneficiaries” as part of our population since we are using EHR data?
 - Every TEP member agreed that we should remove this criterion, but do a sub analysis that includes just Medicare patients 65 and over.
- Should we keep the minimum of 25 procedures as the volume requirement for providers?
 - TEP and BWH decided to run the analysis empirically and decide later.
 - Future follow up discussion regarding volume requirement is needed.
- Is there any reason why we shouldn't harmonize with the NQF 1550 CQM numerator?
 - The TEP and BWH decided not to vote for this yet because we will first figure out a way to capture patients who are not hospitalized.
- Is there any reason not to use legacy data for validation purposes?
 - All TEP members have no concerns and agreed to move forward with using legacy data for validation purposes

Summary of Key Points

PRO-PM Development

- All TEP members stated that the PRO-PM measure development strategy, stages, and methodology was comprehensive, detailed, and thorough. They validated the PRO-PM measure development strategy plan.
- Several TEP members raised concerns regarding the ambitious measure development tasks/timeline presented; suggesting that the time needed to develop and test the proposed measure might be beyond the scope of this grant.
- All TEP members saw value in developing a care goal achievement PRO-PM. The TEP members stated that the proposed measure may facilitate a dialogue between healthcare providers and patients about their goals and expectations related to THA/TKA (e.g., discuss realistic vs. unrealistic expectations) and help them work together to meet those goals and expectations.
- TEP members agreed that care goal achievement is a complex concept. TEP members stressed the need to be practical and use what has already been done to inform the framework and proposed measure. Thus, the MOOR PROMs team based their measure development strategy decisions on existing literature, research studies, measures and reports in the field.
- In a discussion regarding primary and revision total joint replacement, TEP members stated that most measures (i.e., PROMS) focus on primary replacement and exclude revisions and fractures. The TEP members stated to focus only on primary total joint replacements.
- TEP members discussed and agreed that mixed methods data collection (e.g., data gathered by phone, paper, and face to face) of PROMs are necessary for needed response rates for PROMs in general and the project in particular.

eCQM Development

Key points from NQF 2940 conversion Discussion:

- The TEP agreed that the best option for defining the opioid episode is option 2 (go back 30 days, then 90 days post procedure).
- The TEP agreed that sickle cell disease should be added to the exclusion criteria.
- The TEP agreed that we should exclude patients with opioid use disorder. BWH will look into finding this value set.
- The TEP recommended reaching out to NQF to establish a friendly and collaborative relationship. This will help the measure through the scientific method panel.

Key points from NQF 1550 conversion Discussion:

- The TEP agreed that the “Medicare FFS beneficiaries” criterion should be removed.
 - The TEP suggested keeping the criterion for now, but doing a sub analysis that includes just Medicare, and anyone 65 and over (run both ways).
- The TEP agreed that we should address the issue of including inpatient (IP) and outpatient (OP) complications empirically (run the analysis both ways). *We will need to revisit this topic later.*
- Some TEP members felt that the criterion of 25 surgeries/year is a high number for many surgeons. The TEP agreed that we should address this empirically and decide later. We will run it both ways (with >25 surgeries criterion, and with <25 surgeries). *Future follow up discussion on >25 surgeries criterion is required.*
- One TEP member let the group know that Yale CORE’s updated complication rate is x.x% (2016-2017).
- The TEP discussed how it is difficult to compare BWH data to Yale CORE’s because the n is so small. Sample size is major problem. The TEP agreed that the analysis should look at all Partners data.
- The TEP emphasized the importance of testing on multiple EHR systems.
- *Future follow up discussion is needed for the question* about reasons to not harmonize with the NQF 1550 numerator.
- The TEP agreed that using legacy data to validate our measure is a good approach to test on different EHR systems.